



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,188	11/25/2003	Atsushi Kuwabara	KUWABARA6	4218

1444 7590 05/24/2005

BROWDY AND NEIMARK, P.L.L.C.  
624 NINTH STREET, NW  
SUITE 300  
WASHINGTON, DC 20001-5303

EXAMINER

ENSEY, BRIAN

ART UNIT	PAPER NUMBER
----------	--------------

2643

DATE MAILED: 05/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/720,188

Applicant(s)

KUWABARA ET AL.

Examiner

Brian Ensey

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/25/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/07/04 ✓
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION*****Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: See item 26a in figure 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

The abstract of the disclosure is objected to because line 1 identifies "base cover (2)" and line 4 identifies "base cover (29)". Applicant should be consistent when providing part designators. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: The applicant should be consistent in naming elements. See line 6, "center core 24a", line 8, "cutout 24a" and "cutout 24b" and line 17, "cutout 24b"..

Appropriate correction is required.

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frasi U.S. Patent No. 6,526,152 in view of Imahori et al. U.S. Patent No. 7,704,430.

Regarding claim 1, Frasi discloses an electrical acoustic converter, comprising: a base cover (2); an electromagnetic sound-generating part having a diaphragm (17) which is disposed to extend radially of said base cover and which is attached to said base cover; a pair of coil contact springs (32,33) provided on said base cover for connecting said electromagnetic sound-generating part with an outside power source; said electromagnetic sound-generating part including a drive part which has an exciting coil (27) and causes the diaphragm to vibrate, said exciting coil having

Art Unit: 2643

lead wires (28,29), said coil contact springs being contained in housings provided on portions of the base cover inside of an outer peripheral edge of the diaphragm and an end of each of the lead wires extending from the exciting coil being connected electrically at each of said contact springs (See Figs. 1 and 2 and col. 2, line 46 to col.3, line 59). Frasi does not expressly disclose a separate pair of connecting pieces provided in said base cover for connecting electrically said coil contact springs with said electromagnetic sound-generating part, , each of the coil contact springs having one end formed to extend horizontally, said horizontally extending one end of each coil contact spring and an end of each of the lead wires extending from the exciting coil being connected electrically at each of said connecting pieces. However, Imahori teaches a separate pair of connecting pieces (22) provided in said base cover for connecting electrically said coil contact springs with said electromagnetic sound-generating part, each of the coil contact springs (40) having one end formed to extend horizontally (40Ba), said horizontally extending one end of each coil contact spring and an end of each of the lead wires extending from the exciting coil being connected electrically at each of said connecting pieces (See Fig. 4 and col. 6, lines 8-32). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the spring connector of Imahori to replace the spring connector of Frasi for a stress free electrical connection even under external force (See col. 2, lines 61-65).

Regarding claim 2, Frasi does not expressly disclose a separate frame attached to the base cover and a top cover attached to the frame. However, Frasi teaches a mounting ring (25) to secure the diaphragm to the out side frame of the base cover and Imahori teaches a top cover (16) in place of the mounting ring (See Fig. 2). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a top cover to protect the diaphragm from damage.

Regarding claim 3, Frasi does not expressly disclose said pair of connecting pieces are embedded in the base cover. However, Frasi teaches stationary contacts embedded in the base cover for connection to the exciting coil leads and the external connections (See Figs 1 and 2 and col. 3, lines 48-66). Further, Imahori further teaches connecting pieces (22) embedded in the base cover for connection to the exciting coil leads and the external connections (See Fig. 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to embed the connecting pieces in the frame for structural strength.

Regarding claim 4, Frasi further discloses said exciting coil is attached to the diaphragm (See Fig. 2 and col. 3, lines 9-20).

Regarding claim 5, Frasi further discloses said drive part has a magnet (9) attached to the base cover and a top plate (10) mounted on the magnet and disposed to oppose the diaphragm, wherein said exciting coil is disposed to face a side surface of the magnet (See Fig. 2 and col. 2, lines 55-65).

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Ensey whose telephone number is 571-272-7496. The examiner can normally be reached on Monday - Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 571-272-7499. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

**Any response to this action should be mailed to:**

Art Unit: 2643

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**Or faxed to:**

(703) 872-9306, for formal communications intended for entry and for informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand-delivered responses should be brought to: Customer Service Window, Randolph Building, 401 Dulany Street, Arlington, VA 22314

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BKE  
May 17, 2005

  
CURTIS KUNTZ  
SUPERVISORY PATENT EXAMINER  
BIOLOGY CENTER 2600